

## SUBSTITUTE SPECIFICATION

ABSTRACT

A spectrometry instrument with exchangeable accessories (34, 48, 50, 52) providing, for example, different sample presentation facilities. The accessories include a manually operable cam-lock facility (54, 68) for quick and easy attachment of an accessory to the instrument. The instrument also includes an electrical circuit (86-90), which is completed by a circuit portion (100) in an accessory when the accessory is attached to the instrument, for generating a unique identifying voltage (94) to thereby identify that accessory. This allows for automatic loading in a controlling computer of programs for setting up and running the instrument for measurement regimes using that accessory. The spectrometry instrument is preferably a spectrophotometer used for phosphorescence decay measurements in which sequential phosphorescence emission measurements data from each of a number of excitation cycles applied to a sample are taken and then reassembled into a correct time sequence to define a phosphorescence decay characteristic for the sample, that is, measured data points from a second (and subsequent) excitation cycle are interleaved with those from a first excitation cycle. This significantly reduces the time for establishing a phosphorescence decay characteristic. [Fig. 1].